SPECTROSCOPIA MOLECULAR

UN PERIODICO DE NOVAS E INFORMATIONES DE INTERESSE E VALOR AL SPECTROSCOPISTAS

Publicate in interlingua per Forrest F. Cleveland, Professor de Physica, Instituto Technologic de Illinois, Chicago 16. Consiliero linguistic, Dr. A. Gode, Division de Interlingua, Science Service, 80 East 11th St., New York 3. 12 numeros per anno, $2.25. Le periodico depende de receptas financiari ab illes qui beneficia de illo.

CONTORNOS DE LINEAS SPECTRAL E INTERACTIONES MOLECULAR

UN CONFERENTIA international super le contornos de lineas spectral e le interactiones molecular esseva tenite al Instituto Weizmann de Scientia a Rehovoth in Israel ab le 28 al 31 de augusto.

Al prime session (matino, martedi) augusto 29), W. S. Benedict dava un revista del effectos del fortias intermolecular super le spectros molecular, D. H. Rank parlava super le contornos e largores del lineas in le bandas molecular, e W. M. Benesch discuteva largores del lineas de HCl. Le session concludeva se con discussiones super le largores del lineas de HCl e DCl per S. Silverman, le gases estranie e le auto-allargamento in le spectros infrarubie de HF per Def. F. Smith, e le largores de lineas per le methodo de dispersion per J. H. Jaffe.

In le session del postmeridie, R. C. Herman tractava le computation digital rapide del auto-allargamento, L. D. Kaplan le largores del lineas de aqua, R. E. Meyerott le problemas del largores de lineas associate con le transporto de radiation in aere a alte temperaturas, S. Kimel le displaciamentos inducite per le pression, e D. H. Rank le displaciamentos del lineas de bandas molecular per le pression.

Al secunde die, novem discursos esseva presentate. In le matino, G. Birnbaum discuteva le contornos, largores, e displaciamentos de lineas in le spectros microundic de gases, H. A. Gebbie le largores de lineas in le infrarubio remote, E. V. Loewenstein le determination interferometric del largores de lineas in le infrarubio remote, H. L. Welsh le allargamento de lineas in le spectros Raman, B. Vodar le spectros molecular a alte pressiones obtenite a Bellevue, Vu-Hai le spectros infrarubie de moleculas glaciate in matrices solide, e P. H. E. Meijer le contornos de lineas pro le gases nobile solide.

In le postmeridie, solmente duo discursos esseva date: le un per H.

Gemma de Sagessa

SCIENTISTAS HA un secunde objectivo, non minus importante que le satisfaction del curiositate, sed plus difficile a attinger. Isto es le desiro a facer ordine ex le chaos. Illes qui subitemente vide le interrelationes de factos que previemente non pareva esser connectite, e assi vide le designo del toto, senti un satisfaction profunde e esthetic.

-- DETLEV W. BRONK
Science 109(1949)477

CONFERENTIA REHOVOTH

Margenau super le fortias intermolecular e le allargamento causate per le pression, e le altere per M. B. Lewis super le rolo de interactiones inter perturbatores super le contornos de lineas spectral.

Le ultime die del conferentia esseva etiam le ultime die de augusto. In le matino, le themas discutite esseva le theorias del contornos de lineas (R. G. Breene), le transitiones multiquantal in collisiones intermolecular (M. Mizushima), le modello de sphera rigide in le theoria de pertubation collisional (F. Schuller), le effecto simultanee del allargamento de Doppler e de gas estranie super le lineas spectral (L. Galatry), e le displaciamentos de lineas molecular causate per le pression (H. Margenau).

In le postmeridie, A. D. Buckingham parlava super le effectos de gases estranie super le frequentias e largores de lineas vibrational rotational, e A. Ben-Reuven presentava le ultime discurso super le theoria del displaciamentos a pression inducite de lineas molecular. Tunc J. H. Van Vleck dava un summario del contributiones al conferentia.

Isto esseva vermente un assemblea impressive de expertos distinguite in iste campo de spectroscopia. ô

-•-

UN INSTITUTO del chimia quantic e del physica del stato solide essera tenite pro le secunde anno consecutive al Universitate Florida. Isto consistera de un curso preparatori ab le 4 al 9 de decembre, un curso introductori ab le 11 al 30, e un curso avantiate ab le 2 al 13 de januario.

Le programma es arrangiate in collaboration con le Universitate Uppsala (Sveda), con supporto ab le statounitese Fundation National de Scientia.

Pro plus informationes, scribe a Per-Olov Löwdin, Depto. de Chimia, Univ. Fla., Gainesville, Fla., S.U.A.

DUCHESNE ES HONORATE

JULES DUCHESNE, professor al facultate de scientia del Universitate Liege, esseva presentate le medalia de auro del Precio Francqui 1961 per Rege Baudouin del Belgas a un ceremonia al Fundation Universitari a Brussel in junio 1961.

Le precio, premiate per juratos international, esseva pro le recerca distinguite de professor Duchesne in le physica molecular e le spectroscopia a frequentias radionic al Instituto de Astronomia del universitate. ô

-•-

ROBERT T. O'CONNOR ha essite appunctate Chef Agente del Laboratorio de Proprietates Physic de Coton del Division de Recerca e Disveloppamento de Utilisation del Sud del statounitese Departimento de Agricultura a New Orleans in Louisiana,

Iste laboratorio concerne se con le physica de fibras de coton, le microscopia, le essayar de textiles, e le spectroscopia. ô

-•-

G. THYAGARAJAN, Associato de Recerca in le departimento de physica al Instituto Technologic de Illinois, ha acceptate un position simile in le departimento de chimia al Universitate Virginia a Charlottesville. Ille va laborar in le laboratorio de Professor Schatz. ô

-•-

SAMUEL C. WAIT, JR., del statounitese Bureau National de Standards, es nunc un membro del departimento de chimia al Instituto Polytechnic Rensselaer a Troy in New York. ô

-•-

K. V. NARASIMHAM, chef del departimento de physica applicate del Instituto Technologic de Madras, ha devenite un Associato de Recerca in le laboratorio de spectroscopia al Instituto Technologic de Illinois in Chicago. Y. ANANTARAMASARMA, del Universitate Annamalai, ha jungite se con le mesme laboratorio pro laborar verso le grado D. phil. ô

SPECTROSCOPIA APPLICATE

APPLIED SPECTROSCOPY, jornal del Societate pro le Spectroscopia Applicate, nunc publica le Datos Infrarubie Analytic Quantitative organisate per le Societate Coblentz. Contributiones a iste collection debe esser inviate a Dr. A. Lee Smith, Chef del Committee de Revista, Laboratorio de Spectroscopia, Corporation Dow Corning, Midland, Michigan, S. U. A.

Articulos de interesse al spectroscopistas molecular in le prime tres numeros del presente volumine es:

• Le frequentia carbonylic e le stabilitate de alicun diphenoquinonas. J. M. Gordon e J. W. Forbes (Compania Shell Development, Emeryville, Calif. S.U.A.) Appl. Spec. 15(1961)19.

• Correlationes infrarubie spectral e structural de alicun pyridinas. E. M. Godar e R. P. Mariella (Univ. Loyola, Chicago, Ill.) Ibid. 29-33.

• Un assemblea consistente de un fonte de lumine, un disposition pro excitation, e un cella de alte temperatura pro le spectroscopia Raman. G. J. Janz, Y. Mikawa, e D. W. James (Instituto Polytechnic Rensselaer , Troy, N. Y., S.U.A.) Ibid. 47-52.

• Un disposition pro le supporto de un disco KBr. R. A. Pittman (Depto. de Agricultura, New Orleans, La., S. U.A.) Ibid. 55.

• Effectos de allargamento a pression inducite super le intensitates maximal in le bandas infrarubie de hydrocarburos. A. P. Altshuller e A. F. Wartburg (Depto. de Sanitate, Education, e Ben-Esser, Cincinnati, Ohio, S.U.A.) Ibid. 67-9.

• Characterisation physico-chimic de alicun acidos 5,5-disubstituite-1,3-dimethylo-barbituric. J. M. Manson e J. A. R. Cloutier (Depto. de Sanitate e Ben-Esser National, Ottawa, Ontario, Canada) Ibid. 77-9.

o Un methodo simple pro le melioration del sensibilitate in le determination infrarubie de sulfato. J. W. Nehls e J. A. Wheat (E. I. du Pont de Nemours e Compania, Aiken, S. C., S. U.A.) Ibid. 80.

• Un microcella infrarubie de passage longe. D. S. Erley (Compania Dow Chemical, Midland, Mich., S. U. A.) Ibid. 80-1.

• Un cella calefacite pro studios de stabilitate thermal per uso del spectroscopia infrarubie. R. T. Conley e J. F. Bieron (Collegio Canisius, Buffalo, N. Y., S.U.A.) Ibid. 81-2.

• Optica supplementari pro le spectrophotometro infrarubie Perkin-Elmer (modello 21) de duple fasce. L. H. Little (Free School Lane, Cambridge, Anglaterra) Ibid. 83. ô

LEOPOLD MAY
Redactor Gerente.

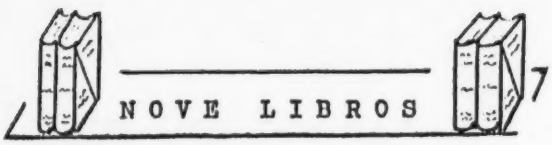
PROGRAMMAS DE ASSEMBLEAS

UN PROGRAMMA del Octave Symposio Ottawa super le Spectroscopia Applicate, tenite ab le 18 al 20 de septembre, pote esser obtenite ab R. Lauzon, Division de Chimia Pur, Consilio National de Recerca, Ottawa 2, Ontario, Canada. Isto contine summarios de 39 discursos date al symposio, incluse un per T. H. Zink super le activitates del Bibliotheca Central de Spectroscopia.

Un altere programma es intitulate "Convention de Spectroscopistas, Quinte Symposio Annue, Roorkee". Iste symposio esseva tenite in India le 2 de januario. Le programma contine summarios de 13 discursos. Un exemplar es obtenibile ab R. K. Asundi, Establimento de Energia Atomic, Division de Spectroscopia, 414-A, Cadell Road, Bombay-28, India ô

-•-

INFRARUBIO IN le education. H. A. Szymanski (Collegio Canisius, Buffalo New York, S. U. A.), Perkin-Elmer Instrument News (Norwalk, Conn., S. U. A.) Vol.12, No.4, 1961. Isto es No.4 de un serie super iste thema. ô



• Tables of Spectrum Lines (Tabulas de Lineas Spectral). A. N. ZAIDEL', V. K. PROKOF'EV, e S. M. RAISKII. Pergamon Press, Headington Hill Hall, Oxford, Anglaterra; 122 E. 55th St., New York 22; 1961. 554 ps. 17 x 24 cm. $14.00.

DESTINATE PRO le uso de recercatores qui es ingagiate in le disveloppamento e application del analyse spectral.

Le prime parte consiste de un compilation del lineas spectral principal del plus importante elementos. Le lineas es listate in le ordine de lor longitudes de unda, e le intensitates es date. Le numero de lineas listate es 41.468 e le numero del elementos includite es 60.

Le secunde parte contine 23.392 lineas de 93 elementos, listate secundo le elementos. Le tertie parte consiste de tabulas auxiliari, tal como tabulas de constantes physic, lineas persistente de varie elementos, potentiales de ionisation, etc.

Infelicemente, in le prefacio per G. S. Landsberg, il es dicite que le tabulas de Harrison contine longitudes de unda reducite a conditiones de vacuo. Isto es un error, proque le longitudes de unda in le libro de Harrison es pro conditiones de aere. Le longitudes de unda in le presente libro etiam es pro conditiones de aere.

Isto es un libro de referentia convenibile pro le necessitates diurne del spectroscopista.

• Absorption Spectra in the Ultraviolet and Visible Region (Spectros de Absorption in le Regiones Ultraviolette e Visibile). Elaborate e redigite per L. LÁNG. Collaboratores, J. SZÓKE, G. VARSÁNI, e M. VIZESY. Academic Press, 111 Fifth Ave., New York 3; 1961. 494 ps. 17 x 24 cm. $18.00.

ISTO ES Vol.I de un compilation de spectros, specialmente de illos obtenite in Hungaria. Illo es un coproduction del Pressa Academic de New York e London e del Casa de Publication del Academia Hungare de Scientias.

Le prime parte consiste de un introduction theoric. Isto discute le structura de spectros; le application del principio Franck-Condon a moleculas polyatomic; le anharmonicitate, dissociation, e predissociation; le forma del systemas de banda electronic; le chromophores simple e conjugate; le complexos; e le rolo del effecto del medio.

Al fin de isto, il ha duo paginas de referentias al litteratura, plure tabulas de conversion, e un lista de formulas usate in le libro.

Tunc seque 414 paginas de spectros, un indice de materias, un indice de formulas, un indice de autores, un lista de figuras, e citationes al litteratura.

Le paginas non es ligate, sed es continite in un libro de nota con tres anulos de un qualitate substantial.

Es dicite al reverso del pagina de titulo que le libro es destinate pro distribution solmente in le Statos Unite de America, le qual pare esser un arrangiamento peculiar.

• Atomic Energy Levels in Crystals (Nivellos de Energia Atomic in Crystallos). JOHN L. PRATHER. Monographia No.19. Bureau National de Standards. Obtenibile ab le Supt. of Documents, GPO, Washington 25, D.C., S. U.A. 88ps. $0.60.

• Rare-Earth Spectroscopy (Le Spectroscopia del Terras Rar). Traduction anglese de un monographia russe de 2 vols., publicate in 1953. Office of Technical Services, U. S. Dept. of Commerce, Washington 25. $7.00. No. 61-31483. δ

DICTIONARIO MULTILINGUAL PRO LE SPECTROSCOPIA

Per Cleveland; Bonino, Dupeyrat, Matossi, Morcillo, Stammreich, Wolkenstein; Herzberg, Mulliken; Gode
Parcella 3; pro Parcella 2, vide Spec. Mol. 10(1961)59

achromatic - Refrangente lumine sin decomposition de illo in su colores o longitudes de unda constituente, con imagines resultante que es practicamente libere de colores o longitudes de unda estranie. In un systema optic, libertate ab le aberration chromatic.

a achromatic
e acromático
f achromatique
g achromatisch
i acromatico
p acromatico

analyse spectrochimic - Le determination del presentia (analyse spectrochimic qualitative) o amonta (analyse spectrochimic quantitative) de un componente (o componentes) in un mixtura per le mesuration del numeros de unda (o frequentias o longitudes de unda), intensitates, e (o) statos de polarisation del lineas emittite, absorbite, o diffundite per le mixtura.

a spectrochemical analysis
e análisis espectroquímico
f analyse spectrochimique
g Spektralanalyse
i analisi spettrochimica
p análise espectroquímica

axes principal - Tres axes de rotation le quales es mutualmente perpendicular e interseca le unes le alteres al centro de un ellipsoide, e duo del quales es dirigite, respectivemente, a ille punctos del ellipsoide que es le minus distante e le plus distante ab le centro. Isto se applica specialmente al ellipsoide momental de un molecula, ubi le centro del ellipsoide coincide con le centro de massa.

a principal axes
e ejes principales
f axes principaux
g Hauptachsen
i assi principali
p eixos principais

constante de distortion rotational D - Le coefficiente del termino $J^2(J+1)^2$ in le expression pro le valor de termino de un molecula linear. Iste termino appare como un consequentia del accrescimento in le distantias internucleari quando le energia rotational es augmentate. D es un mesura del non-rigiditate del molecula. Pro un rotor rigide, D esserea zero.

a rotational distortion constant D
e constante de distorsión rotacional
f constante de distorsion rotationnelle
g Rotationskonstante D
i costante di distorsione rotazionale D
p constante de distorção rotacional D

constante rotational B - Le quantitate $h/8\pi^2cI_B$.

a rotational constant B
e constante rotacional B
f constante de rotation B
g Rotationskonstante B
i costante rotazionale B
p constante rotacional B

I_B - Pro un molecula linear, le momento de inertia principal secundo un axe a transverso le centro de massa e perpendicular al axe internucleari. Pro un rotor symmetric, le un o le altere del duo momentos equal de inertia. Pro un rotor asymmetric, illo del tres momentos de inertia principal que es plus grande que I_A e plus micre que I_C.

ó

a = anglese, e = espaniol, f = francese, g = germano, i = italiano, e p = portugese. (Russo va esser includite.)

• JANUARIO 10-12. Seminario del sud-est super le spectroscopia. Universitate Florida. (W. T. Tiffin, Collegio de Ingenieria, Univ. Florida, Gainesville, Florida, S.U.A.)

• JANUARIO 25-26. Association Spectroscopic del West. Asilomar, California. (R. C. Hawes, Corporation Applied Physics, 2724 South Peck Road, Monrovia, California, S.U.A.)

• FEBRUARIO 16-17. Symposio del Soc. Spec. Appl. (Section Intermountain). Idaho Falls. (G. V. Wheeler, Compania Phillips Petroleum, Cassa Postal 2067, Idaho Falls, Idaho, S.U.A.)

• MARTIO 5-9. 13tie conferentia Pittsburgh super le chimia analytic e le spectroscopia. Symposios super studios spectroscopic de polymeros, super le spectroscopia Raman, e super le spectroscopia de vacuo. Hotel Penn-Sheraton. (L. P. Melnich, Corp. U. S. Steel, Monroeville, Pa., S.U.A.)

• MARTIO 28-31. Symposio super le spectroscopia del Instituto de Petroleo. Univ. London. (Secretario General, Instituto de Petroleo, 61 New Cavendish St., London W.1, Anglaterra.)

• PRIMAVERA. Instituto de resonantia magnetic nucleari. Buffalo. (H. A. Szymanski, Depto. de Chimia, Collegio Canisius, Buffalo 8, New York, S.U.A.)

• APRIL 30-MAIO 3. 13tie symposio annue, Societate pro le Spectroscopia Applicate (Section Chicago). Hotel Conrad-Hilton. (J. S. Ziomek, Depto. de Chimia, Univ. De Paul, 1036 Belden Ave., Chicago 14, Ill., S.U.A.)

• JUNIO 11-15. 17me symposio super le Structura Molecular e le Spectroscopia. Univ. Ohio State. (R. A. Oetjen, Depto. de Physica, Univ. Ohio State, Columbus 10, Ohio, S.U.A.)

• JUNIO 18-22. Conferentia international de spectroscopia. Univ. Maryland. Societate pro le Spectroscopia Applicate. (B. F. Scribner, Bureau National de Standards, Washington 25, D. C., S.U.A.)

• AUGUSTO 21-24. Symposio international super le spectroscopia infrarubie remote. Cincinnati, Ohio. (E. A. Janning, Instituto de Recerca, Univ. Dayton, Dayton 9, Ohio, S.U.A.)

• SEPTEMBRE 10-15. Symposio international super le structura molecular e le spectroscopia. (Symposio international super le structura molecular e le spectroscopia, Consilio de Scientia, Parco Ueno, Tokio, Japon.) ô

SEMINARIOS SUPER LE SPECTROSCOPIA DE ABSORPTION

LE SECTION Chicago del Societate pro le Spectroscopia Applicate organisa un serie de seminarios super le spectroscopia de absorption. Iste seminarios va consister de 24 assembleas a intervallos de duo septimanas, comenciante le 4 de octobre e terminate le 11 de april

Le assembleas essera tenite in le auditorio de Beckman Instruments, a Lincolnwood in Illinois. Coordinatores del seminarios es J. R. Ferraro (Laboratorio National Argonne) e J. S. Ziomek (Universitate De Paul), qui etiam es le coordinatores del 13tie Symposio Annue de Spectroscopia de America Central (vide le calendario in le columna adjacente).

Le seminarios va concerner se con le instrumentation infrarubie, le preparation de specimenes, le interpretationes de spectros infrarubie, le theoria de gruppos, e le spectroscopia ultraviolette de absorption. Le discursos essera presentate per parlatores in, o proxime a, Chicago, qui es expertos in le un o le altere de iste campos. ô

-•-

SPECTROS RAMAN. J. Rose (Depto. de Chimia Physic, Collegio Technic Birkenhead, Coventry, Anglaterra) J. Roy. Inst. Chem. 85(1961)83-88; 132-136. Iste duo articulos constitue un revista excellente de iste campo. ô

OPTICS AND SPECTROSCOPY

"I am engrossed in working through the sequence of articles: On The Theory of Optical Activity in Crystals . . . . ."

"I feel that the Russian scientists are contributing much worthwhile information . . . . ."

"It is the universal opinion of our technical staff that this translation is an extremely important adjunct to American technical literature . . . . ."

OPTICS AND SPECTROSCOPY is the leading Russian journal in the field, its coverage corresponding in part to that of the *J. Opt. Soc. Am.*, although the spectroscopy papers are more theoretical than analytical or instrumental. Luminescence and optical properties of materials are fully represented, instrumental optics, diffraction and coherence problems less so.

OPTICS AND SPECTROSCOPY is published *monthly* in English translation 3 months after the Russian original e.g. the January 1962 issue will appear in March/April.

SEND IN YOUR SUBSCRIPTION FOR 1962 NOW

FIRST CLASS
Permit No. 33649
Washington, D. C.

BUSINESS REPLY MAIL
No postage stamp necessary if mailed in the U. S. A.

POSTAGE WILL BE PAID BY

OPTICS AND SPECTROSCOPY
Optical Society of America
1155 Sixteenth Street, N. W.
Washington 6, D. C.

ORDER FORM

Please enter my/our subscription to **OPTICS AND SPECTROSCOPY** 1962 issues (Vol. XII and XIII) and continue until countermanded:

( ) at OSA member rate ..... $ 7.50
( ) at OiS CLUB member rate* $11.00
( ) at regular rate $15.00
( ) Please send OSA membership information

**Any member of these Societies may subscribe at this special rate: ASA, AAPT, ACS, ACA, AOCS, APS, ASTM, Electrochemical Soc., IRDG-UK, IRIS, Inst. Chemists-India, Inst. Physics and Physical Soc-UK, ISA, I-SCC, Netherlands Chemical Soc., SAS, SSP, Soc. for Chem. Ind. UK, Chem. Inst. Canada, SPSE.*

Name of your Society ..... M'ship No. .....

Subscriber's name .....

Address .....

.....

Absorption Spectra in the Ultraviolet and Visible Region

A Theoretical and Technical Introduction

VOLUME 1, *1961, 518 pp., $18.00*

VOLUME 2, *Fall 1961, about 400 pp., $18.00*

VOLUME 3, *in preparation*

Elaborated and edited by:
L. LÁNG

Collaborators:
J. SZÖKE
G. VARSÁNYI
M. VIZESY

Published in association with the Hungarian Academy of Sciences

Volume 1 is a collection of spectra constructed to the same scale for an extremely wide assortment of compounds, the majority of which have never before been published. For increased clarity and ease of comparison, the spectra are presented in a logarithmic scale. The table pertaining to spectra of individual compounds contains data observed in different solvents. The collection is supplemented by an addendum which presents the fundamental theoretical information required for the interpretation of the spectra.

Contents ▶

ACADEMIC PRESS INC.

111 Fifth Avenue, New York 3, New York

Absorption Spectra in the Ultraviolet and Visible Region

A Theoretical and Technical Introduction

Elaborated and edited by:
L. LANG

Collaborators:
J. SZÖKE
G. VARSANYI
M. VIZESY

VOLUME 1, *1961, 518 pp., $18.00*

Theoretical Introduction
Structure of Spectra
The Application of the Franck-Condon Principle to Polyatomic Molecules (35)
Anharmonicity, Dissociation and Predissociation
The Form of Electronic Band Systems
Chromophores
Simple Chromophores
Conjugate Chromophores
Complexes
Role of the Medium Effect
Tables of Conversion
LITERATURE
Figures (411 pp.)
SUBJECT INDEX
FORMULA INDEX
AUTHOR INDEX
FIGURE INDEX
LITERATURE.

VOLUME 2, *Fall 1961, about 400 pp., $18.00*

VOLUME 3, *in preparation*

ACADEMIC PRESS INC.
111 Fifth Avenue, New York 3, New York

F716-6109

Printed in U.S.A.

INDEX FOR 1955-1959

Ultraviolet and Visible Absorption Spectra

By **HERBERT M. HERSHENSON**
Pratt and Whitney Aircraft Division, United Aircraft Corporation

September 1961 *133 pp, $8.00*

With the publication of this book, Dr. Hershenson's index of ultraviolet and visible absorption spectra has been extended to cover five additional years. Workers in the field will once more have an up-to-date guide to the literature to facilitate further research. The 1930-1954 *Index* is still available, as is the *Infrared Absorption Spectra, Index for 1945-1957.*

Review of the 1930-1954 Index:

"...the book is a most valuable and reliable one. Several months' laboratory use have failed to reveal any errors in the references themselves, and the author's claim that 'references contained in this index often lead to other articles which, while not concerned with spectra, nevertheless present information of importance to the investigation in question,' seems quite justified."

—*British Bulletin of Spectroscopy*

over ▸

ACADEMIC PRESS
NEW YORK and LONDON

Ultraviolet and Visible Absorption Spectra

INDEX FOR 1930-1954

By HERBERT M. HERSHENSON

1956, (Third Printing, 1961), 205 pp., $12.00

Third Printing

"This book should prove useful not only in finding published spectra, but also as a source for calorimetric methods of inorganic analysis, for locating articles concerning a particular compound, and for correlating spectral data which might otherwise require actual experimentation."

—*Analytical Chemistry*

Infrared Absorption Spectra

INDEX FOR 1945-1957

By HERBERT M. HERSHENSON

1959, (Second Printing, 1961), 111 pp., $7.00

Second Printing

". . . in 1956, Dr. Hershenson published an index of ultraviolet and visible spectra, covering the years 1930 to 1954, and rendered a great service to the scientific community. Now Dr. Hershenson has repeated 'doing a good thing' and produced an index of infrared spectra covering the years 1945 to 1957. The infrared index will be just as useful to workers in the field as the precursor volume is, and Dr. Hershenson deserves praise and gratitude for the chore he has undertaken."

—*Archives of Biochemistry and Biophysics*

ACADEMIC PRESS *New York and London*

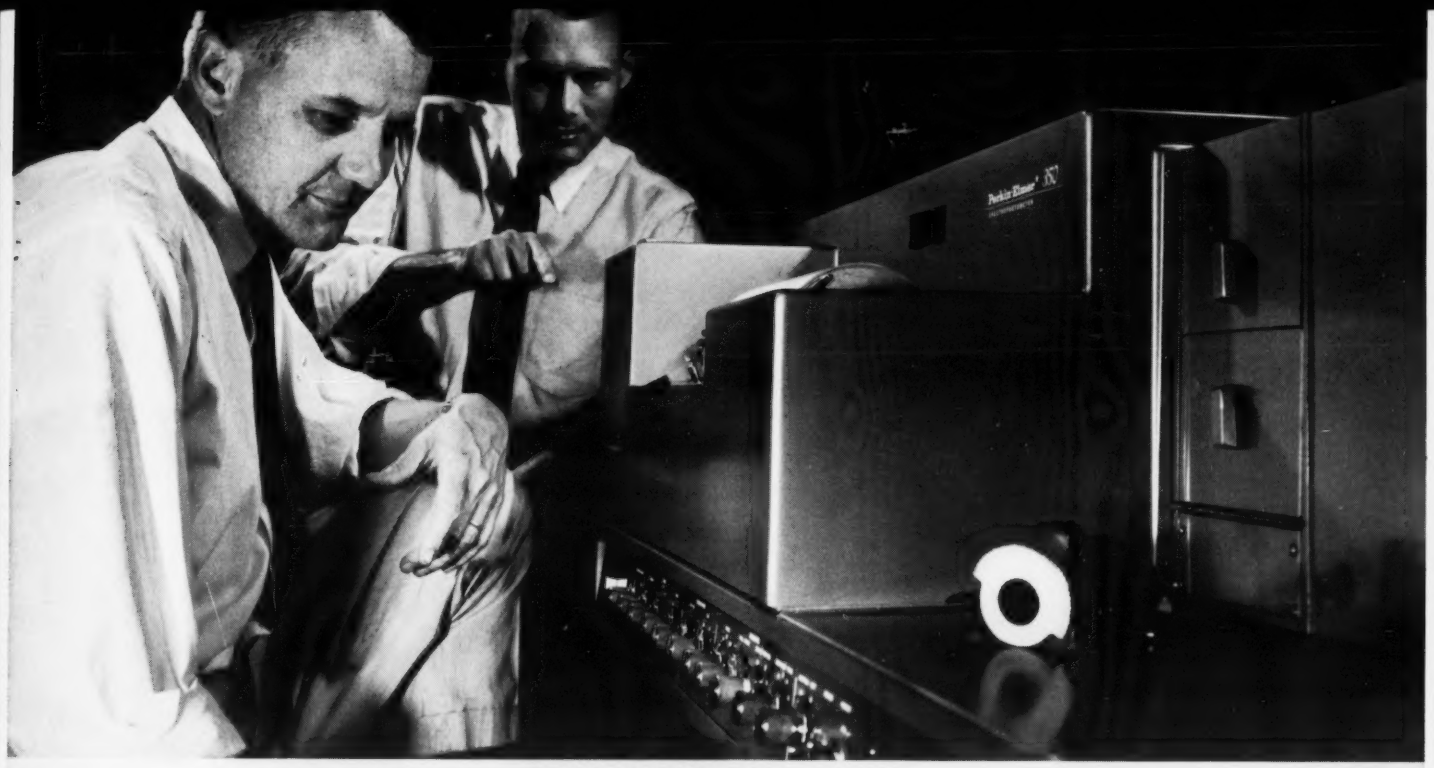
111 Fifth Avenue, New York 3, New York **17 Old Queen Street, London, S. W. 1**

GERMAN AGENCY: Minerva G.m.b.H. Holbeinstr. 25-27, Frankfurt am Main

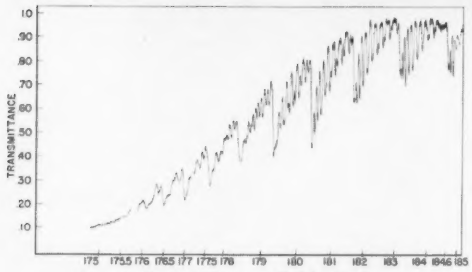
INDIAN AGENCY: Asia Publishing House Nicol Road, Ballard Estate, Bombay 1

F787-6109

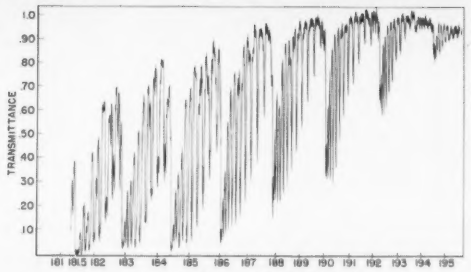
Printed in U.S.A.



Far Ultraviolet Spectrum of Oxygen.



Air and nitrogen, 2 cm. cell, 14-minute scan.



Pure oxygen, 10 cm. cell, 30-minute scan.

FAR ULTRAVIOLET SPECTRAL REGION OPENED BY NEW PERKIN-ELMER MODEL 350 SPECTROPHOTOMETER

With Perkin-Elmer's new Model 350 UV-VIS-NIR Spectrophotometer, you can detect and measure less sample—over a wider wavelength range—with greater precision—than with any other ultraviolet instrument. The Model 350 provides this capability routinely from 175mμ in the far ultraviolet to 2.7μ in the near infrared. You get analytical versatility over the widest wavelength range and through the widest range of optical densities. Compare these advantages offered by the Model 350.

• **Widest wavelength range in one instrument.** The Model 350's optimized wavelength capability ranges from 175mμ in the far ultraviolet to 2.7μ in the near-infrared.

• **Maximum photometric efficiency throughout range.** High absorbances can be measured with accuracy throughout the range of the Model 350. Specially-coated, Perkin-Elmer reflecting optics, combined with high-efficient sources, assure maximum transmission of maximum energy. The double-monochromator dispersion system reduces interfering stray light to a negligible level.

• **Unexcelled resolution.** The standard Model 350 provides uniformly high resolution throughout its range; in the far ultraviolet—a region of increasing significance—the Model 350's superior energy and dispersion characteristics mean the best resolution possible in the field today.

• **Ordinate scale expansion.** Adding range and versatility to the Model 350's excellent absorbance accuracy is the new, integral Ordinate Scale Expansion feature. Any 2, 5, 10 or 20% portion of the transmittance scale—even when the reading is near the zero or 100% line—can be electronically expanded by discrete factors of 50X, 20X, 10X or 5X, facilitating the determination of weak bands.

And more:

- Zero Absorbance Line Compensation
- Fast Pen Response
- Wide Dynamic Scan Speed Range
- High Sensitivity
- Integrated Controls
- Large Sample Compartments
- Wide Range of Accessories

Write for more information and spectra on the Model 350.

INSTRUMENT DIVISION

Perkin-Elmer *Corporation*

NORWALK, CONNECTICUT

The term Perkin-Elmer is a registered trademark of the Perkin-Elmer Corporation.